

DESCRIPTION OF A NEW SPECIES OF *PRONUCULA*
(*BIVALVIA*, *NUCULIDAE*) FROM NEW SOUTH WALES
AND ADDITIONAL NOTES ON SOME OTHER SPECIES OF
THE SAME GENUS

By W. BERGMANS *

Text-fig. 1.

Among some lots of *Nuculidae* that were kindly lent to me by Mr. J. Voorwinde, Honorary Associate of the Australian Museum, Sydney, for study purposes, one specimen at once attracted my attention. It had already been labeled "*Nucula* sp. nov." by the owner and although it is often questionable whether it is justified to describe a new species from only one specimen the one concerned is so evidently different from all the known related species that have to be considered that I do not hesitate to confirm Mr. Voorwinde's remark with the following description.

In naming the novelty after Mr. Voorwinde I wish to express my admiration and appreciation of his indefatigable work in favour of the malacology of New South Wales, a work that on account of its mainly preparing character does not often come into publicity.

Pronucula voorwindei sp. nov.

Text fig. 1 a-c.

Description: Valve stout, convex, somewhat triangular in outline, slightly longer than high, less inequilateral than in other known *Pronucula* species of the same region. The embryonic shell is small, spherical and smooth. Its surface lacks the microscopical granular or pitlike structures that are present in other species. Beneath its surface irregularly placed tube-like features can be observed that give a similar impression. Compared to the embryonic shell surface structure in, for instance, *Pronucula hedleyi* (Pritchard & Gatliff) the subsuperficial structure in *voorwindei* is much coarser. From the relative smallness of the embryonic shell together with the habitus of the whole valve, its adultness — or almost adultness — might be concluded. (This conclusion is at least not contradicted by the fact that the umbo is not bifid and by the absence of a clear indication that it has been bifid, as is too the case in adult shells of *Pronucula* species that have bifid umbos when juvenile.) Only a small part of the umbonal region of the valve is without sculpture. The rest of the exterior is sculptured concentrically as

* Correspondence address: Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands.

well as radially. There are 14 strong, rounded, concentric ribs, about as broad as their interstices and covering the whole valve. They become weaker and sometimes run into each other on the anterior and posterior ends of the valve. Narrow but conspicuous radial riblets are visible only in the interstices of the concentrics. Their number increases towards the ventral margin, where I counted some 65 radials, and they do not extend on the anterior and posterior parts of the valve. The ventral margin is crenulated interiorly and exteriorly corresponding to the radial sculpture. The posterior region is slightly depressed and could be regarded as a real escutcheon.† The hinge line is arched, the chondrophore does not project beyond it. There are 6 teeth in the anterior and 5 in the posterior teeth row. The dorsal margins of the adductor scars are distinct, the pallial line is not visible. Exterior and interior of the valve are shining and coloured yellowish light brown.

Type material: Holotype, a single left valve, Australian Museum, Sydney, New South Wales, Australia, registered number C.67030. Dredged in 24 fathoms at Port Stephens, New South Wales, Australia.

Measurements: Length 1.80 mm, height 1.58 mm and section 0.58 mm.

Discussion: Of the known Australian *Pronucula* species, the very small *P. saltator* Iredale from Low Isles seems to be closest related, having a subtrigonal outline and a chondrophore that hardly projects beyond the hingeplate. In sculpture *P. cancellata* Cotton comes close, with strong concentric and weaker radial ribs. Radially unsculptured anterior and posterior shell parts are features that *P. voorwindei* has in common with *P. decorosa* Hedley, *P. cancellata* and *P. hedleyi*.

† In my former article on *Pronucula* (1968) 'anterior' and 'posterior' are confounded in all the descriptions except where Hedley is cited. Describing *Ennucula duritas* Iredale (1931), McMichael and Voorwinde made the same exchange (1966: 15).

By courtesy of the Director of the Australian Museum, Sydney, I was enabled to examine some samples of *Pronucula* from the Museum Collection. The following data can be added now to our knowledge of the distribution of some *Pronucula* species in New South Wales.

Pronucula cancellata Cotton

One valve, in bad condition, was dredged in 24 fathoms at Port Stephens.

Pronucula vincentiana Cotton & Godfrey

One juvenile specimen was taken from 6-8 fathoms, at Chinamans Beach, Middle Harbour, and one obsolete valve was found at North Head.

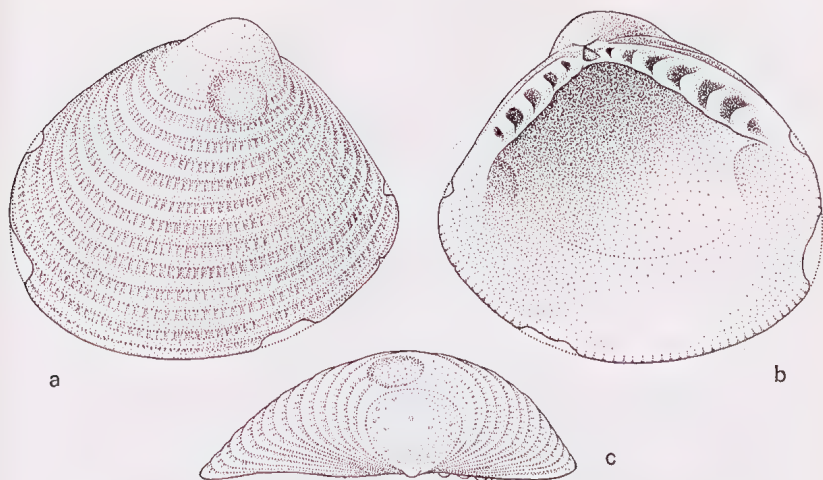


Fig. 1a-c. *Pronucula voorwindei* sp. nov., Holotype (drawings by the author).

Pronucula pusilla (Angas)

Four rather fresh, juvenile valves came from 2-4 fathoms, Fairlight, Port Jackson. One valve was dredged in 6-8 fathoms at Chinamans Beach, Middle Harbour.

Pronucula micans (Angas)

Two very obsolete valves were collected at North Head. One juvenile valve was dredged in 6-8 fathoms at Chinamans Beach, Middle Harbour.

Of *Pronucula decorosa* Hedley, I have seen specimens from localities in South Australia (dredged off Eucla; Collection Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) and New South Wales (25-40 fathoms off Sydney; 40 fathoms off Laurieton; 25-40 fathoms off Nelson Bay; same collection). In adult specimens I counted from 35 to 40 radials near the margin. The epidermical pustules are arranged in rows that follow the radial ribs. The surface of the embryonic shells is microscopically pitted. The umbo in small specimens is bifid.

REFERENCES

- BERGMANS, W. 1968. A survey of the species of the genus *Pronucula* in New South Wales. *J. Malac. Soc. Aust.*, 11: 71-78, pls. 11, 12.
- IREDALE, T. 1939. *Scient. Rep. Gt Barrier Reef Exped. Mollusca* Part I: 209-425, pls. I-VII.
- McMICHAEL, D. F. and J. VOORWINDE, 1966. Illustrations of unfigured New South Wales Marine Molluscs, Part I. *J. Malac. Soc. Aust.*, 10: 13-20, pls. 2-3.